

- SUBJECT: WEEKLY STATUS REPORT
- 1. QUALIFICATION OF LMSD-DEVELOPED RELEASING TIE RODS IN SHOCK AND VIBRATION WAS COMPLETED ON 11 JANUARY 1960. NO DIFFICULTIES WERE EXPERIENCED.
- 2. IN ABOVE QUALIFICATION TEST, FLIGHT CONFIGURATION
  WAS CLOSELY SIMULATED. INSTRUMENT NO. 5 WAS USED WITH 10 POUNDS
  OF PAYLOAD AND 200 FEET OF LEADER. AFTER VIBRATION AND SHOCK
  N ROLL, PITCH AND YAW, INSTRUMENT WAS OPERATED. NO MECHANICAL
  OR ELECTRICAL MALFUNCTIONS WERE ENCOUNTERED. NO PAYLOAD
  WELDING OR BREAKAGE HAS BEEN DETECTED AND PREVIOUS OUT-OF-PHASE
  SHUTTLE CONDITIONS HAVE NOT REOCCURRED. SHUTTLES WERE INSTRUMENTED
  AND INSTRUMENTATION RECORDS SHOW EXCURSIONS LESS THAN ONE INCH
  WHICH ARE OF NO CONSEQUENCE FOR SUCCESSFUL INSTRUMENT OPERATION.
  - 3. CORONA SUBSYSTEM 9006 (FTV 1052) COMPLETED VIRBRATION
    TESTING ON 9 JANUARY. HATS TEST WAS COMPLETED AT 2400 HOURS
    9 JANUARY. BUYOFF WAS COMPLETED ON 100 JANUARY AND UNIT WAS SHIPPED



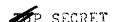
939 (III 15118)

PAGE -2-

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TO EASE. LAUNCH DATE IS 26 JANUARY.

- 4. CORONA SUBSYSTEM 9007 (FTV 1054) IS NOW BEING INSTRUMENTED FOR ACCELERATION TESTING DURING THE PERIOD 14-16 JANUARY AT LINSD. FLIGHT INSTRUMENTATION WILL BE COMPLETED AFTER ACCELERATION TEST. BUYOFF IS SCHEDULED FOR 1 FEBRUARY AND LAUNCH IS SCHEDULED FOR 18 FEBRUARY.
- 5. INSTRUMENT NO. 14 COMPLETED ACCEPTANCE VIBRATION TESTS ON 6 JANUARY AND WILL BE SHIPPED TO WEST COAST ON 12 JANUARY.
- 6. MAIN PLATE DEFLECTION TESTS WERE COMPLETED AT BOSTON
  ON 4-5 JANUARY. IN THIS TEST DEFLECTIONS OF INSTRUMENT MAIN PLATE
  WERE INTRODUCED THROUGH THE TIE RODS AND MAIN DRIVE MOTOR AVERAGE
  CURRENT MEASURED. TENSION, COMPRESSION, AND COMBINED TENSION—
  COMPRESSION FORCES INTRODUCED. TESTS SHOW AT 60/1000 DEFLECTION
  IN COMPRESSION MAIN DRIVE MOTOR STALLS. AT 60/1000 DEFLECTION
  IN TENSION, MAIN DRIVE MOTOR CURRENT CHANGED VERY SLIGHTLY FROM
  ZERO DEFLECTION CONDITION WITH COMBINED TENSION—COMPRESSION
  FORCES AND 60/1000 DEFLECTION IN EACH OPPOSING SET OF RODS,
  MAIN DRIVE MOTOR DREW TWO TIMES CURRENT AND LABORED. FIGURE OF
  60/1000 DEFLECTION IS IN EXCESS OF DEFLECTIONS ESTIMATED FOR
  ASCENT AND ORBITAL CONDITIONS AND IT MAY DE CONCLUDED THAT INSTRUMENT
  SHOULD NOT STALL WITH 42/1000 MAXIMUM DEFLECTIONS INDUCED BY STIFF
  TIE RODS.
- 7. PAYLOAD TESTING PROGRAM CONTINUED AT BOSTON USING POLYESTER LATERIALS FURNISHED BY MR ED CREEN. RESULTS FOR WEEK OF 4 JANUARY ARE AS FOLLOWS:





939 (IN 15118)

PAGE -3-

50X1

- A. DYNAMIC TENSILE TEST AT VACUUM OF TEN TO THE MINUS
  FIVE MI HG, UNABLE TO INDUCE BREAKAGE OF 2.5 MILS OR 4 MILS
  THICK POLYESTER OVER CORNCOB SKEW ROLLER AT LIMIT OF TEST LACHINE.
  CORNCOB ROLLERS WILL BE REMOVED AND REPLACED BY HELICAL ROLLERS
  AND TESTING RESULED.
- B. FOLDING ENDURANCE TEST WITH 4 MIL THICK POLYESTER

  AT SEA LEVEL AND 40 PER CENT RELATIVE HUMIDITY, COATING CRACKED

  AT 6900 FOLDS AND BROKE AT 11,000 FOLDS. WITH 2.5 MILS THICK

  POLYESTER, COATING CRACKED AT 5700 FOLDS AND MATERIAL BROKE AT

  9600 FOLDS.
- C. STATIC TENSILE STRENGTH TEST 1.5 MILS POLYESTER

  BROKE AT 180 POUNDS LOAD, BREAKING ELONGATION OF 100 PER CENT,

  AT SEA LEVEL. NO INDICATION OF SEPARATING OR PEELING OF EMULSION

  AND PELLOID DACKING AT BREAKING POINT. WITH 4 DIL THICK POLYESTER

  UNABLE TO CAUSE BREAKAGE AT 260 POUNDS WHICH IS LOAD LIVIT OF

  TESTER.
- D. MOISTURE DYNAMICS TEST 2.5 MILS THICK MATERIAL

  LOSES 2.25 PER CENT WATER GOING FROMEO PER CENT RELATIVE

  HUMIDITY TO ZERO PER CENT R.H. 90 PER CENT EQUILIBRIUM TIME

  EQUAL 15 MINUTES. 4 MILS THICK MATERIAL LOST 1.4 PER CENT

  WATER AND EQUILIBRIUM TIME WAS 10 MINUTES.
- E. 250 FEET OF 4 HIL MATERIAL WAS RUN THROUGH INSTRUMENT
  NO. 5 AND RETURNED TO HR ON 5 JANUARY. TRACKING AND
  TRANSPORT APPEARED NORMAL.

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939 (IN 15118)

PAGE -4-

50X1

8. FLIGHT SCHEDULE PLANNED FOR BALANCE OF "C" FOLLOWS:

FTV 1055/9008 - MARCH 8

FTV 1056/9009 - MARCH 22

FTV 1057/9010 - APRIL 5

FTV 1058/9011 - APRIL 19

FTV 1059/9012 - MAY 3

9. FLIGHT SCHEDULE PLANNED FOR "C" PRIME FOLLOWS:

FTV 1061/9013 - MAY 24

FTV 1062/9014 - JUNE 7

FTV 1101/9015 - JUDE 22

FTV 1103/9016 - JULY 19

FTV 1105/9017 - OCTOBER 11

FTV 1103/9018 - OCTOBER 25

FTV 1109/9019 - NOV 3

FTV 1110/9020 - NOV 22

THIS SCHEDULE IS CURRENTLY IN JEOPARDY DUE TO REPORTED SIX WEEK SLIP IN DELIVERY OF MARK (ROLAN) IV RECOVERY CAPSULES. LMSD AND GE MANAGEMENT NOW INVESTIGATING NECESSARY ACTION TO RECOVER SLIPPAGE.

END OF MESSAGE

